Kentucky UNBRIDLED SPIRIT
Cabinet for Economic Development

Alternative Energy Resources in Kentucky

The Governor's Office of Energy Policy, the University of Kentucky, and the University of Louisville are working to develop a roadmap for a 25% renewable energy plan; scheduled to be released in early 2008. The study will be the first comprehensive analysis of the state's renewable potential.
www.kppc.org/krec/Articles/25x25%20for%20KY%20fact%20Sheet%20FINAL.pdf

Generally, biomass holds the most promise for renewable energy in Kentucky. This would include (a) traditional agricultural crops and "energy crops" which could be turned into liquid transportation fuels and (b) woody biomass which could be burned/gasified to produce electricity (or liquid fuels).

Wind energy and hydro power are probably next on the list for industrial-scale electricity. A national study once put Kentucky's total wind potential in the 60 MW range, but this would assume complete utilization of sensitive areas like state parks. Likewise, hydro has greater potential, but flow of water cannot be guaranteed to the developer. The Mother Ann Lee Hydroelectric Station at Lock & Dam 7 on the Kentucky River became the first Kentucky hydropower project to be certified as low impact.

Solar and small-wind will see dramatic increases as "distributed generation" electric systems, grid-tied residential and commercial systems less than 50kW in size, but their contribution relative to total production will be small (0 - 10%). This may present a unique opportunity for job creation that is large relative to its energy potential.

Kentucky has no conventional geothermal resources - direct access to high temperature sources to produce steam. The Massachusetts Institute of Technology (MIT) did a study in the summer of 2007 that speculates there is a yet untapped potential in deep geothermal resources of which Kentucky would benefit.

Perhaps the greatest potential source of renewable energy in Kentucky will come from energy efficiency. The potential for energy efficiency in Kentucky is great, possibly exceeding all renewable energy resources combined.

Ground source heat exchange is a form of energy efficiency. Public schools in the state are recognizing the potential for ground source heat pumps. The larger universities use central plants which are not compatible with individual ground source systems.

Ethanol Facilities

Company	Capacity	Location	Status	Web address
Commonwealth Agri-Energy	33 million	Hopkinsville	Active	Commonwealthagrienergy.com
Parallel Products	5 million	Louisville	Active	www.parallelproducts.com
Proposed Projects				
Agri Fuels	50 million	Brandenburg	Late 2008	n/a
Bluegrass BioEnergy	55 million	Fulton Co.	Spring 2008	www.bluegrassbio.com
For the People, LLC	50 million	Louisville	Late 2008	n/a

Kentucky UNBRIDLED SPIRIT
Cabinet for Economic Development

Alternative Energy Resources in Kentucky

Biodiesel Facilities

Company	Capacity	Location	Status	Web address
Griffin Industries	2 million	Butler	Active	www.griffinind.com
Owensboro Grain	50 million	Owensboro	Active	www.kentuckycleanfuels.org
Union Co. Biodiesel Co.	2 million	Butler	Active	n/a

Biodiesel is being used in 18 vehicle fleets across Kentucky, including the Cincinnati/Northern Kentucky International Airport, Kentucky state government, Fort Knox Military Reservation, Mammoth Cave National Park, East Kentucky Power Cooperative, Kentucky Public School Systems, Kentucky State Resort Parks, Murray State University, and the University of Kentucky.

Landfill Gas – An "Enviro Watt" Renewable Energy Source - Kentucky Touchstone Energy Cooperatives have constructed five landfill gas to electric generation plants. The plants are the Bavarian Landfill near Walton, KY, Green Valley Landfill near Grayson, KY, the Laurel Ridge Landfill near London, Ky., the Pendleton County Landfill near Butler, KY and the Pearl Hollow Landfill near Elizabethtown, KY.

Tire-Derived Fuel (TDF) – Two companies in Kentucky use tire-derived fuel (made from waste tires). They are: Owensboro Municipal Utilities – www.omu.org and Newpage Fine Paper – www.newpage.corp.

Kentucky Alternative Energy Resources
The Governor's Office of Energy Policy's Division of Renewable Energy & Energy Efficiency presents a guide to renewable energy in Kentucky. www.energy.ky.gov/dre3/.

Renewable Energy Projects at the University of Kentucky Center for Applied Energy Research (CAER): www.caer.uky.edu/research/biomass.shtml

University of Kentucky College of Agriculture Energy Program:
www.bae.uky.edu/energy/default.htm

Alternative energy resources in Kentucky, U.S. Dept. of Energy:
www.eere.energy.gov/states/alternatives/resources_ky.cfm

Sources: The Governor's Office of Energy Policy, Division of Renewable Energy & Energy Efficiency. www.energy.ky.gov.
The Kentucky Business & Information System (KBIIS) www.thinkkentucky.com/KBIIS.
Kentucky Clean Fuels Coalition. www.kentuckycleanfuels.org.
Kentucky Environmental and Public Protection Cabinet, Division of Waste Management.
Low Impact Hydropower Institute. www.lowimpacthydro.com.

November 2007